

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1—24. Canceled.

25(New) A method for boundary detection in a stream of digital samples comprising:
receiving the stream of digital samples, wherein each digital sample comprises a plurality of values;
correlating a first value of a first digital sample with a corresponding value in each one of a plurality of previously received digital samples;
calculating a correlation value based on the correlation;
comparing the correlation value against a threshold; and
determining the presence of the boundary based on the comparison, wherein the calculating step comprises summing up a correlation result resulting from each correlation of the first value with the corresponding value in the plurality of previously received digital samples.

26(New). A method according to claim 25, wherein the corresponding values in each one of the plurality of previously received digital samples are selected based on their position in the previously received digital samples.

27(New). A method according to claim 26, wherein a position of the first value in the first digital sample is same as positions of corresponding values in each one of the plurality of previously received digital samples.

28(New). A method according to claim 25, wherein the correlating step comprises:
comparing the first value with the corresponding value in each one of the plurality of
previously received digital sample values;
generating a one value each time the first value matches with a corresponding value in the
plurality; and
generating a zero value each time the first value does not match with the corresponding
value in the plurality.

29(New). A method according to claim 25, wherein the threshold is a predetermined
value.

30(New). A method according to claim 25, wherein the threshold is adaptive and its
value changes according to network conditions.

31(New). A method according to claim 25, wherein the boundary detection is
performed after a specified number of digital samples are received.

32(New). A circuit for detecting boundaries in a stream of digital samples, the circuit
comprising:

- a memory for storing at least a portion of the stream of digital samples wherein each
digital sample comprises a plurality of values;
- a plurality of comparators coupled to the memory, a first input of each comparator
coupled to a first memory location storing a first digital sample and a second input
of each comparator coupled to different memory locations wherein the different
memory locations correspond to digital samples received prior to the first digital
sample and at least one value of the first digital sample stored in the first memory
location is desired to be compared with a corresponding value of each one of the
digital samples stored in the different memory locations,
- each comparator is configured to output a one value if the comparison is equal and a zero
value if the comparison is not equal; and

a summing circuit coupled to the plurality of comparators, the summing circuit containing circuitry to add the outputs from the plurality of comparators and produce a correlation value.

33(New). The circuit of claim 32, wherein the circuit is configured to generate a correlation value after the receipt of a specified number of digital samples.

34(New). The circuit of claim 32, wherein the comparators is configured to output a one value if the digital samples being compared are within a specified difference of each other and the comparator will output a zero value if the digital samples being compared are outside of a specified difference of each other.

35(New). A communication device comprising:
a transceiver to transmit and receive information being sent to and from the device;
a transmit path coupled to the transceiver, the transmit path containing circuitry to convert information from the device into a form suitable for transmission;
a receive path coupled to the transceiver, the receive path containing circuitry to convert information sent to the device into a form suitable for use; and
a processor coupled to the transmit and receive paths, the processor containing circuitry to detect boundaries in a stream of digital samples, the processor comprising:
a memory for storing at least a portion of the stream of digital sample values;
a plurality of comparators coupled to the memory, a first input of each comparator coupled to a first memory location storing a first digital sample and a second input of each comparator coupled to different memory locations wherein the different memory locations correspond to digital samples received prior to the first digital sample and at least one value of the first digital sample stored in the first memory location is desired to be compared with a corresponding value of each one of the digital samples stored in the different memory locations,
each comparator is configured to output a one value if the comparison is equal and a zero value if the comparison is not equal; and

a summing circuit coupled to the plurality of comparators, the summing circuit containing circuitry to add the outputs from the plurality of comparators and produce a correlation value.